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PATENT ABSTRACTS OF JAPAN

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(54) FATS AND OILS COMPOSITION

(57) Abstract:

PURPOSE: To obtain a fats and oils composition, consisting of natural palm oils having a specific fatty acid composition and natural vegetable oils in a specified proportion with suppressed rise in acid value of fats and oils and whitening by crystals thereof and suitable as frying, spraying fats and oils, etc.

CONSTITUTION: A fats and oils composition, consisting of (A) 40W95% mediummelting fraction in natural palm oil with \leq 46 iodine value and \leq 3.5% diglyceride content and (B) 5W60% natural vegetable oils with 100W140 iodine value and having 5W40% polyunsaturated fatty acid content higher than diene fatty acids in fatty acids and mild flavor or taste without hardened butter odor, strong tastiness and excellent oxidation stability of the fats and oils with the following solid fat contents. \geq 30% at 10°C, \geq 10% at 20°C and \leq 10% at 30°C.

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CLAIMS

(57) [Claim(s)]

[Claim 1] The fats-and-oils constituent to which the polyunsaturated fatty acid more than the diene fatty acid in 39-95, and a composition fatty acid is characterized [an iodine value / 10 degrees C] by being 10% or less by solid-state fat content by 30 degrees C 10% or more at 20 degrees C 30% or more 5 to 40% by a diglyceride content consisting of 40 - 95% of 3.5% or less of melting point fractions in natural palm oil, and 60 - 5% of natural vegetable oil of iodine values 100-140 by 46 or less iodine value.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[Industrial Application]

Especially this invention relates to the fats-and-oils constituent suitable for the fats and oils for flies, the fats and oils for sprays, etc.

[Description of the Prior Art]

There is a thing given in JP,61-44120,B as the fats and oils for flies which used natural palm oil, and fats and oils for sprays. Fats and oils given [this] in an official report are 35 or less iodine value and the natural palm oil fractionation oil of 35 degrees C or less of melting points which have specific fatty acid composition. this thing -- a color tone good and flavor -- it has the features, like it is frank, and feels refreshed and there is no hardening smell, but on the other hand it had the flavor of the hard butter style, the use as a fly oil or a spray oil was faced, and the acid-number rise was what has the problem of the crystal of fats and oils distributing on fly epidermis, expressing on it, and whitening on it early

Therefore, even if it uses the purpose of this invention as the fats and oils for flies, and fats and oils for sprays, it is to offer the fats-and-oils constituent with which whitening by an acid-number rise of fats and oils and the crystal of fats and oils was suppressed.

[The means for solving a technical problem]

By this invention, the iodine value which a diglyceride content becomes from 40 - 95% of 3.5% or less of melting point fractions in a natural cream oil and 60 - 5% of natural vegetable oil of iodine values 100-140 by 46 or less iodine value offers the fats-and-oils constituent with which the polyunsaturated fatty acid more than the diene fatty acid in 39-95, and a composition fatty acid be characterized by solid-state fat content being 10% or less at 10 degrees C at 30% or more and 20 degrees C 5 to 40% at 10% or more and 30 degrees C Therefore, the above-mentioned

purpose is attained.

The fats-and-oils constituent of this invention is explained in full detail below.

The melting point fraction in natural palm oil which is the first component of the fats-and-oils constituent of this invention is 3% or less of thing preferably 3.5% or less of diglyceride contents in 46 or less iodine value. If a color tone and flavor will become bad if an iodine value exceeds 46, stability also gets worse [the melting point fraction in natural palm oil] and a diglyceride content exceeds 3.5%, since there is much saturation acid, neither hydrolysis nor a transition reaction becomes easy to happen and is desirable [the diglyceride of palm oil].

Furthermore, the above-mentioned melting point fraction in natural palm oil is 40 - 95% among the fats-and-oils constituent of this invention. If it is not desirable and exceeds 95% since it comes to cause a sugar crying phenomenon when the stability of a fats-and-oils constituent and the state of a crystal get worse, for example, a doughnut is lifted at less than 40%, flavor will deteriorate [the rise of the acid number] early, a hard butter smell will become remarkable, if it uses as a fly oil, albinism will become easy to happen to fly epidermis, and it is a book.

Moreover, the iodine values of the natural vegetable oil which is the second component of the fats-and-oils constituent of this invention are 100-140. That to which an iodine value exceeds 140 among these natural vegetable oil has stability and bad flavor, and, as for an iodine value, less than 100 thing has little acid-number depressor effect.

Furthermore, the above-mentioned natural vegetable oil is 60 - 5% among the fats-and-oils constituent of this invention. When the albinism like **** arises in a fats-and-oils constituent, and there is little acid-number depressor effect and it exceeds 60% at less than 5%, it is bad unstable and is a book.

As the above-mentioned natural vegetable oil used for the fats-and-oils constituent of this invention, a rice bran oil, a NATANE oil, soybean oil, cone oils, those blend oils, etc. are desirable, and especially a rice bran oil is desirable.

The fats-and-oils constituent of this invention consists of the first component of the above, and the second component, and, moreover, for an iodine value, the polyunsaturated fatty acid more than the diene fatty acid in 39-95, and a composition fatty acid is [solid-state fat content] 10% or less at 30 degrees C 10% or more in 20 degrees C 30% or more by 10 degrees C 5 to 40% as a whole. Therefore, the fats-and-oils constituent of this invention adjusts and blends the second component for a start so that an iodine value, a polyunsaturated fatty acid, and solid-state fat content may go into this range.

In the fats-and-oils constituent of this invention, if an iodine value is [acid-number elevation depressor effect] few bad insipid by less than 39 and an iodine value exceeds 95, icing nature will be poor and it will be bad unstable.

Moreover, if a desirable thing is not made on flavor among the composition fatty acid of the fats-and-oils constituent of this invention as the polyunsaturated fatty acid more than a diene fatty acid is less than 5%, and it exceeds 40%, stability will get worse.

Furthermore, a **** injury becomes bad if it is not adjusted so that the solid-state fat content of the fats-and-oils constituent of this invention may become at 30% or more and 20% and may become 10% or less at 30 degrees C 10% or more by 10 degrees C.

Since hardness is given to a fats-and-oils constituent, this fats-and-oils constituent can be made to contain the portion or all the hydrogenated fats and oils of 50 degrees C or more of melting points 5% or less in the fats-and-oils constituent of this invention. If the loadings of these fats and oils exceed 5%, a hardening smell comes out, it becomes hard too much, and stability gets worse and is not desirable, either. It is desirable for the hardened oil of each of vegetable oil,

such as vegetable oil, such as rapeseed oil, soybean oil, a cone oil, and cotton seed oil, and fish oil, ****, and ****, etc. to be mentioned, for example, and to use especially rapeseed hardened oil as the portion or all the hydrogenated fats and oils of 50 degrees C or more of such the melting points.

The fats-and-oils constituent of this invention adjusted as mentioned above can be used as it is very preferably as the fats and oils for flies, and fats and oils for sprays, and can also be further used as shortening stock oil fat. Under the present circumstances, the various additives usually used for the fats and oils for flies, the fats and oils for sprays, shortening stock oil fat, etc. can be used.

[Example]

Hereafter, the example of this invention is explained.

In this example, the fats-and-oils constituent shown in the following table -1 was adjusted, and IV and AOM were measured about each fats and oils.

On the other hand, the fly test which lifts 30 yeast doughnuts to the 800g of the above-mentioned fats and oils in 180 degrees C and 6 hours was performed, and each elevation and flavor (panel test by ten persons' panelist) of AV were investigated. Moreover, the lifted doughnut was left at 20 degrees C overnight, icing nature was observed and doubled, and the existence of whitening was examined. Those results were shown in the following table -1.

In addition, about the flavor test by the panelist, it evaluated in four stages as follows. namely, O -- very -- fitness and O -- fitness and ** -- a defect and x -- very -- a defect -- it comes out and a certain thing is shown Moreover, about icing nature as well as a flavor test, it evaluated in four stages.

According to the result shown in Table -1, by blending a liquefied oil shows that the effect that stability suppresses elevation of a ***** thing of the acid number is acquired. moreover, palm oil -- by sensing a smell peculiar to hard butter, if independent, although a white patchy pattern appears [flavor] on the surface of deep-fried dishes at best moreover, like this example, flavor is boiled markedly, and improves and, as for by blending a liquefied oil, a whitening phenomenon also shows being stopped

[Effect of the Invention]

A taste is strong, and the fats-and-oils constituent of this invention has flavor, a taste milder than the conventional thing, etc., there is no hardening smell, when it uses as the fats and oils for flies, and fats and oils for sprays, the fats-and-oils constituent of this invention has the good oxidation

stability of fats and oils, and whitening of the product by crystal generating of the fats and oils which fats and oils acid-number-went up, and adhered etc. is suppressed.

TECHNICAL FIELD

[Industrial Application]

Especially this invention relates to the fats-and-oils constituent suitable for the fats and oils for flies, the fats and oils for sprays, etc.

EFFECT OF THE INVENTION

[Effect of the Invention]

A taste is strong, and the fats-and-oils constituent of this invention has flavor, a taste milder than the conventional thing, etc., there is no hardening smell, when it uses as the fats and oils for flies, and fats and oils for sprays, the fats-and-oils constituent of this invention has the good oxidation stability of fats and oils, and whitening of the product by crystal generating of the fats and oils which fats and oils acid-number-went up, and adhered etc. is suppressed.

TECHNICAL PROBLEM

[Description of the Prior Art]

There is a thing given in JP,61-44120,B as the fats and oils for flies which used natural palm oil, and fats and oils for sprays. Fats and oils given [this] in an official report are 35 or less iodine value and the natural palm oil fractionation oil of 35 degrees C or less of melting points which have specific fatty acid composition. this thing -- a color tone good and flavor -- it has the features, like it is frank, and feels refreshed and there is no hardening smell, but on the other hand it had the flavor of the hard butter style, the use as a fly oil or a spray oil was faced, and the acid-number rise was what has the problem of the crystal of fats and oils distributing on fly epidermis, expressing on it, and whitening on it early

Therefore, even if it uses the purpose of this invention as the fats and oils for flies, and fats and oils for sprays, it is to offer the fats-and-oils constituent with which whitening by an acid-number rise of fats and oils and the crystal of fats and oils was suppressed.

MEANS

[The means for solving a technical problem]

By this invention, the iodine value which a diglyceride content becomes from 40 - 95% of 3.5% or less of melting point fractions in a natural cream oil and 60 - 5% of natural vegetable oil of iodine values 100-140 by 46 or less iodine value offers the fats-and-oils constituent with which the polyunsaturated fatty acid more than the diene fatty acid in 39-95, and a composition fatty acid be characterized by solid-state fat content being 10% or less at 10 degrees C at 30% or more and 20 degrees C 5 to 40% at 10% or more and 30 degrees C Therefore, the above-mentioned purpose is attained.

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The melting point fraction in natural palm oil which is the first component of the fats-and-oils constituent of this invention is 3% or less of thing preferably 3.5% or less of diglyceride contents

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Furthermore, the above-mentioned melting point fraction in natural palm oil is 40 - 95% among the fats-and-oils constituent of this invention. If it is not desirable and exceeds 95% since it comes to cause a sugar crying phenomenon when the stability of a fats-and-oils constituent and the state of a crystal get worse, for example, a doughnut is lifted at less than 40%, flavor will deteriorate [the rise of the acid number] early, a hard butter smell will become remarkable, if it uses as a fly oil, albinism will become easy to happen to fly epidermis, and it is a book.

Moreover, the iodine values of the natural vegetable oil which is the second component of the fats-and-oils constituent of this invention are 100-140. That to which an iodine value exceeds 140 among these natural vegetable oil has stability and bad flavor, and, as for an iodine value, less than 100 thing has little acid-number depressor effect.

Furthermore, the above-mentioned natural vegetable oil is 60 - 5% among the fats-and-oils constituent of this invention. When the albinism like **** arises in a fats-and-oils constituent, and there is little acid-number depressor effect and it exceeds 60% at less than 5%, it is bad unstable and is a book.

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[Translation done.]